Application No.: 10/626,259

Response Dated January 28, 2008

Response to Final Office Action Dated September 26, 2007

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the above-captioned patent application:

LISTING OF CLAIMS

 (Currently Amended) A metering tip eapable of to aspirate and dispense aspirating-and-dispensing a quantity of fluid, said metering tip being attached attachable to a metering apparatus and, said metering tip comprising:

a tapered plastic body including an interior, an upper tip opening and a lower tip opening through which said fluid is aspirated and dispensed used for aspirating and dispensing the fluid;

said interior including a plurality of adjacent stepped areas, each of said stepped areas including a sharp diametrical edge at the junction of the surface of an interior region and the surface of the stepped area, said surfaces being substantially orthogonal and wherein each said sharp diametrical edge latches a meniscus of the fluid and minimizes oscillation of the fluid caused by air, said tip further including an-axial a cylindrical portion having a read window defined by said interior portion and having a substantially constant planar interior diameter to permit an optical instrument to view therethrough a volume of fluid contained in said axial cylindrical portion, said tip further including at least one stepped area disposed between said defined read window and said upper tip opening, and in which said plurality of adjacent stepped areas are axially disposed between said lower tip opening and said read window.

- (Canceled).
- (Canceled).
- (Canceled).
- 5. (Canceled).

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(Currently Amended) A metering tip eapable of that aspirates and dispenses
aspirating and dispensing a quantity of fluid, said metering tip comprising;

a tapered plastic body including an interior, an upper tip opening and a distal lower tip opening used for aspirating and dispensing the fluid, said body further including an axial cylindrical portion having a substantially constant planar internal diameter, thereby at least a portion of said axial cylindrical portion defining a read window that permits an optical instrument to directly measure fluid retained in said axial cylindrical portion region therethrough;

the interior of said axial portion interior including at least one stepped area having a sharp diametrical edge at the junction of the surface of an interior region and surface of the stepped area, said surfaces being substantially orthogonal and wherein said sharp diametrical edge is used to latch latches a meniscus of the fluid and reduce oscillation of the a dispensed fluid dead volume that is drawn back into the cylindrical portion of said tip following dispense of a portion thereof, wherein said at least one stepped area is disposed above said read window.

- (Canceled).
- (Canceled).
- (Currently Amended) A method for <u>performing an optical read of dead volume</u> reducing fluid oscillation of fluid in a metering tip, said method including the steps of:
 - i) attaching a metering tip to a metering apparatus;
- ii) aspirating the a volume of fluid into said metering tip using said metering apparatus, said tip comprising at least one stepped area within the interior of the metering tip, each said at least one stepped area including a sharp diametrical edge at the junction of the surface of an interior region and surface of the stepped area, said surfaces being substantially orthogonal; and
- iii) dispensing a portion, but not the entirety, of the volume of fluid from said metering tip through said lower tip opening wherein said dispensed portion of fluid is moved over the sharp diametrical edge of said at least one stepped area so as to latch a lower meniscus of the fluid passing said at least one stepped area and thereby reducing oscillation of the fluid in the metering tip; and

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iv) moving a meniseus of drawing the remaining fluid in said metering tip past the sharp diametrical edge thereby for latching the meniseus of the fluid passing said at least one stepped area and thereby reducing oscillation of the fluid in the metering tip wherein said metering tip includes an upwardly and into an axial cylindrical section of said metering tip, said axial cylindrical portion being defined with a substantially constant planar internal diameter defining a read window wherein one of said at least one stepped areas is located above said read window, wherein said stepped area above said read window flattens the upper meniscus of a said retained volume of fluid within said-tip; and

optically reading the retained volume through said defined read window.

- 10. (Canceled).
- (Canceled).
- 12. (Currently Amended) A method as recited in Claim [[10]] 9, including the additional steps step of drawing fluid up into the interior of said metering tip and sealing the lower tip opening of said metering tip prior to performing a spectrophotometric read of said fluid through said read window said reading step.
- 13. (Currently Amended) A method for reducing fluid oscillation for a fluid retained within a metering tip, said method including the steps of:
 - i) attaching a metering tip to a metering apparatus;
- ii) aspirating an initial volume of fluid into said metering tip, said tip comprising a lower tip opening, an upper tip opening and an interior, said interior further comprising at least one stepped area, said at least one stepped area including a sharp diametrical edge at the junction of the surface of an interior region and the surface of the stepped area, said surfaces being substantially orthogonal, said tip further including an axial cylindrical portion defined by a substantially constant planar interior diameter, thereby further defining having a read window; and

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iii) dispensing fluid from said tip, wherein said dispensing step includes the step of moving a meniscus of fluid past the sharp diametrical edge thereby for latching the fluid, a meniscus of the fluid passing said at least one stepped area and thereby reducing oscillation of the fluid in the metering tip.

- 14. (Previously Presented) A method as recited in Claim 13, wherein said method includes the step of dispensing retained fluid onto at least one reaction device, wherein said at least one stepped area is disposed proximate to said lower tip opening to latch a lower meniscus of dispensed fluid to reduce oscillations thereof during the dispense step.
- 15. (Previously Presented) A method as recited in Claim 14, wherein said at least one stepped area includes a plurality of adjacent stepped areas disposed in relation to said lower tip opening.
- 16. (Currently Amended) A method as recited in Claim 13, including the additional steps of:

dispensing portions of the initial volume of aspirated fluid onto at least one reaction device;

aspirating drawing the remaining volume of fluid upwardly into the confines of said tip, said remaining volume being the difference between said initial volume and the volume of said dispensed portions into said axial portion of said tip, said tip including at least one stepped area above immediately above said read window to latch an upper meniscus of said retained fluid volume to flatten said meniscus to permit an accurate optical reading of said retained fluid volume.

17. (Previously Presented) A method as recited in Claim 16, wherein said remaining fluid volume is directly accessible through the tip through said defined read window by an optical instrument without intermediate structure while attached to said metering apparatus.